

Application No.: 10/035,985
Date of Response: 05/06/2004
Concerning the Office Action of: 02/12/2004

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An implantable fuel cell assembly comprised of means for converting
5 fat to glycerol and fatty acid, means for converting glycerol to hydrogen, means
for converting fatty acid to hydrogen, means for converting a bodily fluid to a
gas selected from the group consisting of hydrogen, oxygen, and mixtures
thereof, and fuel cell means for producing electricity from hydrogen and
oxygen.
- 10 2. (Original) The implantable fuel cell assembly as recited in claim 1, wherein
said implantable fuel cell assembly is disposed beneath the skin of a human
being.
3. (Original) The implantable fuel cell assembly as recited in claim 2, wherein
said implantable fuel cell assembly is disposed near fat cells.
- 15 4. (Canceled) ~~The implantable fuel cell assembly as recited in claim 1, wherein
said implantable fuel cell assembly is comprised of means for harvesting fat
cells.~~
5. (Canceled) ~~The implantable fuel cell assembly as recited in claim 4, wherein
said means for harvesting fat cells is comprised of a microknife.~~
- 20 6. (Original) The implantable fuel cell assembly as recited in claim 1, wherein
said means for converting said fat to said glycerol and said fatty acids is
comprised of a fat-permeable material.

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7. (Original) The implantable fuel cell assembly as recited in claim 6, wherein
said means for converting said fat to said glycerol and said fatty acids is
comprised of lipase enzyme.
8. (Original) The implantable fuel cell assembly as recited in claim 7, wherein
5 from about 3 to about 10 percent of said lipase enzyme is present, based upon
the total mass of said lipase enzyme and said fat.
9. (Original) The implantable fuel cell assembly as recited in claim 8, further
comprising a porous material with an average pore size of less than about 10
nanometers.
- 10 10. (Original) The implantable fuel cell assembly as recited in claim 1, wherein
said means for converting said fatty acids to hydrogen is comprised of beta
oxidase enzyme.
11. (Original) The implantable fuel cell assembly as recited in claim 10, wherein
said means for converting said fatty acids to hydrogen is comprised of
15 oxaloacetate.
- 12 (Original) The implantable fuel cell assembly as recited in claim 1, further
comprising a glycerol fuel cell.
13. (Original) The implantable fuel cell assembly as recited in claim 12, wherein
said glycerol fuel cell is comprised of an anode and anode enzyme disposed on
20 said anode, wherein said anode is configured and arranged for electroxidizing
an anode reductant in the presence of the anode enzyme.
14. (Amended) The implantable fuel cell assembly as recited in claim 13, wherein
said glycerol fuel cell is comprised of a cathode spaced apart from said anode

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and cathode enzyme disposed on said cathode, wherein said cathode is configured and arranged for electroreducing a cathode oxidant in the presence of said cathode enzyme.

15. (Original) The implantable fuel cell assembly as recited in claim 1, wherein

5 said gas is oxygen.

16. (Original) The implantable fuel cell assembly as recited in claim 1, wherein

 said fuel cell assembly further comprises a rechargeable power supply.

17. (Original) The implantable fuel cell assembly as recited in claim 16, wherein

 said fuel cell assembly further comprises a piezoelectric means for converting

10 electricity into mechanical motion.

18. (Original) The implantable fuel cell assembly as recited in claim 16, wherein

 said fuel cell assembly further comprises electrostrictive means for converting

 electricity into mechanical motion.